

HBP SURGERY WEEK 2021 **VIRTUAL** & ONSITE

MARCH 25-27, 2021 GRAND WALKERHILL HOTEL, SEOUL, KOREA www.khbps.org

& The 54<sup>th</sup> Annual Congress of the Korean Association of HBP Surgery



**LV OP 4-4** 

## A Novel Online Calculator for Estimating Survival Benefit of Adjuvant TACE in Patients Undergoing Surgery for HCC

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**Introduction** : Although adjuvant transcatheter arterial chemoembolization (TACE) for resected hepatocellular carcinoma (HCC) may improve survival for some patients, identifying which patients can benefit remains challenging. The present study aimed to construct a survival prediction calculator for individualized estimating the net survival benefit of adjuvant TACE for patients with resected HCC.

**Methods** : From a multicenter database, consecutive patients undergoing curative resection for HCC were enrolled and divided into the developing and validation cohorts. Using the independent survival predictors in the developing cohort, two nomogram models were constructed for patients with and without adjuvant TACE, respectively, which predictive performance was validated internally and externally by measuring concordance index (C-index) and calibration. The difference between two estimates of the prediction models was the expected survival benefit of adjuvant TACE.

**Results** : A total of 2,514 patients met the inclusion criteria for the study. The nomogram prediction models for patients with and without adjuvant TACE were respectively built by incorporating the same eight independent survival predictors, including portal hypertension, Child-Pugh score, alpha-fetoprotein level, tumor size and number, macrovascular and microvascular invasion, and resection margin. These two prediction models demonstrated good calibration and discrimination, with all the C-indexes of greater than 0.75 in the developing and validation cohorts. A browser-based calculator was generated for individualized estimating the net survival benefit of adjuvant TACE.

**Conclusions** : Based on large-scale real-world data, an easy-to-use online calculator can be adopted as a decision aid to predict which patients with resected HCC can benefit from adjuvant TACE.

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